

# Skin rash from dengue fever

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## DESCRIPTION

A 47-year-old Japanese man presented with a history of having been bitten by mosquitoes, several years earlier in the Philippines, this resulted in a fever and a rash which dissipated spontaneously. He had stayed in the Philippines for 3 weeks, 1 month prior to hospitalisation, and was bitten by several mosquitoes. He had a fever for 6 days and a systemic rash for 3 days before consultation at our hospital. At the time of consultation, his blood pressure was 122/78 mm Hg; pulse 80 bpm, respiratory rate 16 breaths/min and body temperature 38.4°C. Congestion of the palpebral conjunctiva and systemic rash were observed. A tourniquet test on the right arm showed increased petechial haemorrhaging (figure 1). Further, 'islands of white' of the normal skin surrounded by

erythema were noted (figure 2). Blood tests showed the blood platelet count at  $52 \times 10^9$  cells/L, with abnormal liver function. He received in-patient treatment for suspected dengue fever. A definitive diagnosis of dengue fever was obtained by assessing the levels of dengue virus IgM antibody that was 6.8 (positive cut-off, 1.1 or higher), IgG antibodies 3.5 (positive cut-off, 1.1 or higher) and dengue virus NS1 antigen 18.4 (positive cut-off, 1.0 or higher). A considerable amount of fluid replacement stopped the worsening of his condition and mitigated it, and within 1 week, he was discharged. Even in non-epidemic areas, the diagnosis should be considered in any patient presenting with a characteristic skin rash that has developed within 14 days after even a brief trip to the tropics or subtropics.<sup>1</sup>



**Figure 1** Tourniquet test positive: showing numerous minute petechial haemorrhages after tourniquet application.



**Figure 2** The 'islands of white' of the normal skin surrounded by erythema.



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### Learning points

- ▶ Positive tourniquet test and 'islands of white in a sea of red' are characteristic skin rash in dengue fever.
- ▶ Even in non-epidemic areas, the diagnosis should be considered in any patient presenting with characteristic skin rash that has developed within 14 days after even a brief trip to the tropics or subtropics.

**Competing interests** None.

**Patient consent** Obtained.

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### REFERENCE

- 1 Simmons CP, Farrar JJ, Nguyen VC, *et al.* Dengue. *N Engl J Med* 2012;366:1423–32.

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